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ABSTRACT

The ComField model of the Northwest Regional Educational Laboratory requires that trainees demonstrate, prior to certification, their ability to bring about learning outcomes in children and parental involvement in the program. Hence, the functions and behaviors of teachers in given settings need to be specified. The ComField model itself does not specify them; rather the adopting college and public school system should be equal partners in selecting the competencies and behaviors to be taught in laboratory and live conditions. Similarly, they should jointly evaluate trainee performance and make policy decisions. The model also expects the trainee to become a self-understanding, self-directed learner, to contribute to the design and continual assessment of the program, and to function in a wide range of social contexts. The latter presumes the involvement of the community. The model provides for a preservice component, which can be adapted to many types of education programs, and an inservice component for supervising and practicing teachers. It also features eight support systems: personnel, supplies, instructional development, program evaluation, program modification, cost accounting, and a computer-based information management system. (See ED 034 076 for a readers' guide to the nine funded models.) (LP)

ED035603

Brief Title:

Guide to
Northwest Regional
Educational Laboratory
Teacher Education Model

Schalock

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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A GUIDE TO
A COMPETENCY-BASED, FIELD-CENTERED
SYSTEMS APPROACH TO ELEMENTARY TEACHER EDUCATION

H. Del Schalock

Published by
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The following Guide is one of the nine which appears in the publication A Reader's Guide to the Nine Models for Preparing Elementary Teachers. The Guide is available free in limited quantity from the ERIC Clearinghouse on Teacher Education; for $4.00 from American Association of Colleges for Teacher Education, One Dupont Circle, Washington, D.C. 20036; and for $1.25 in microfiche and $15.90 in hard copy from the ERIC Document Reproduction Service (EDRS), 4936 Fairmont Ave., Bethesda, Md. 20014. The order number at EDRS is ED 034 076.

The Clearinghouse is publishing each of the nine guides separately as well as collectively for the convenience of those readers interested in a specific elementary teacher education model. The above individual Guide also is available free in limited quantity from the Clearinghouse and for $0.25 in microfiche and $2.00 in hard copy from EDRS. An abstract of the above Northwest Regional Educational Laboratory model will appear in the May 1970 Research in Education.

SP003 521

Introduction

On October 16, 1967, the U.S. Office of Education issued a request for the development of proposals on educational specifications for comprehensive undergraduate and inservice teacher education programs for elementary teachers. (The term elementary teacher included preschool teachers and teachers through grade 8.)

These proposals were for the design phase (phase I) of an intended three-phase project. By January 1, 1968, 80 proposals had been received. On March 1, 1968, the Bureau of Research awarded nine contracts to design conceptual models for programs for the training of prekindergarten and elementary school teachers, for the preservice as well as inservice components. These models were completed October 31, 1968.

Reports on phase I have been made under the following titles: A Model for the Preparation of Elementary School Teachers (Florida State University), G. Wesley Sowards, project manager; Behavioral Science Elementary Teacher Education Program (Michigan State University), W. Robert Houston, project director; A Competency-Based, Field-Centered Systems Approach to Elementary Education (Northwest Regional Educational Laboratory), H. Del Schalock and James R. Hale, editors; Specifications for a Comprehensive Undergraduate and Inservice Teacher Education Program for Elementary Teachers (Syracuse University), William Benjamin and others, authors; The Teacher-Innovator: A Program To Prepare Teachers (Teachers College, Columbia University), Bruce R. Joyce, principal author.

Also, Georgia Educational Model Specifications for the Preparation of Elementary Teachers (The University of Georgia), Charles E. Johnson, Gilbert F. Shearron, and A. John Stauffer, directors; Educational Specifications for a Comprehensive Elementary Teacher Education Program (The University of Toledo), George E. Dickson, director; A Model of Teacher Training for the Individualization of Instruction (University of Pittsburgh), Horton C. Southworth, director; and Model Elementary Teacher Education Program (University of Massachusetts), Dwight Allen, principal investigator, and James M. Cooper, project director.

In phase II, several institutions are studying the feasibility of developing, implementing, and operating a model program based upon specifications in phase I. In the third phase, the U.S. Office of Education hopes to be able to support implementation of some of the model proposals for restructuring teacher education.

Since the models cover almost 6,000 pages devoted to detailed specifications of behavioral objectives, materials, treatments, evaluation of specific elements of the programs, and the like, the ERIC Clearinghouse on Teacher Education, on April 15-16, 1969, sponsored in collaboration with the American Association of Colleges for Teacher Education (AACTE) which acts as its fiscal agent, a writers' conference in which key personnel involved in developing the models wrote guides to their specific programs.

A second-day of verbal interaction followed, at which time the writers discussed their personal reactions to all of the models and past, present, and future implications for teacher education. The panelists wanted to make it clear that in their discussion the models were being described at but one point on a continuum. They called the models catalytic agents which have generated a great deal of discussion, interaction, and continuing change. At this conference they said it was important for them to explore the range of alternative interpretations of issues such as, "What are behavioral objectives? What is a model? What does it mean to personalize? To individualize?" They said that some kind of projection needed to be made about what remains to be done--either by resolving issues, or if they are resolved, to act upon them. This whole exercise [the writers' conference] will have made a major contribution to teacher education if it focuses on the issues at the center of this whole models effort and helps to extend the models, they said.

This guide to the models should assist those who are interested in learning about or implementing them. The entire collection of models is available from the ERIC system in either hard copy or microfiche and from the Government Printing Office (GPO) in a honeycomb binding. The ERIC ordering address is: EDRS, The National Cash Register Co., 4936 Fairmont Avenue, Bethesda, Md. 20014. The GPO address is: The Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The reports must be ordered by number. Any request without order numbers will be returned. Some of the reports listed do not have ERIC order numbers. These reports may not be ordered until the listing appears in Research in Education, the monthly abstract journal of ERIC.

The reports are available at the following prices:

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S:	Broad Curricular Planning for the ComField Model Teacher Education Program		026 324	.85	.25
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Volume III	FS 5.258:58024	5.00	027 287	29.65	2.25

Also available (or to be available soon) are the following related reports: 1. Nine Proposals for Elementary Teacher Education, A Description of Plans To Design Exemplary Training Programs by Nicholas A. Fattu of Indiana University. This document is a summary of the nine originally proposed programs which were funded in phase I of the project for preparing elementary teachers. Available through ERIC: ED 018 677, Price: $6.55 for hard copy; $0.75 for microfiche. 2. Analysis and Evaluation of Plans for Comprehensive Elementary Teacher Education Models by William E. Engbretson of Governors State University. This document is an analysis of the 71 proposed, but unfunded models of phase I. Available through ERIC: ED 027 268, Price: $12.60, hard copy; $1.00, microfiche.

3. A self-initiated critique of the Syracuse University model program, Specifications for a Comprehensive Undergraduate and Inservice Teacher Education Program for Elementary Teachers. ED 027 276, Price: $7.20 for hard copy; $0.75 for microfiche. 4. Some Comments on Nine Elementary Teacher Education Models by the System Development Corporation. This paper is adapted from remarks made at an American Educational Research Association conference in November 1968. Available through ERIC: ED 029 813, Price $0.75 for hard copy; $0.25 for microfiche. 5. Twenty-page summaries of the nine reports are available, free of charge, from: Elementary Teacher Education Project, Division of Elementary and Secondary Research, National Center for Educational Research and Development, U.S. Office of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202.

6. A Bibliography of References Used in the Preparation of Nine Model Teacher Education Programs by James F. Schaefer Jr. (Washington, D.C.: ERIC Clearinghouse on Teacher Education and the Bureau of

Research, U.S. Office of Education, 1969). ED 031 460, Price: $4.95, hard copy; $0.50, microfiche. 7. Analytic Summaries of Specifications for Model Teacher Education Programs, 8. A Short Summary of 10 Model Teacher Education Programs, and 9. Techniques for Developing an Elementary Teacher Education Model are three publications which were issued by the System Development Corporation in July 1969.

It is appropriate to express appreciation to the Clearinghouse staff for its dedication and hard work in completing this manuscript: Dr. Joost Yff, assistant director, and Mrs. Dorothy Mueller, program associate, whose advice and guidance were invaluable; Mrs. Lorraine Poliakoff and Mrs. Suzanne Martin, information analysts, who provided the index to this volume; and to the clerical staff of the Clearinghouse, especially Mrs. Vera Juarez, whose steady assistance made this publication possible. Appreciation also should be expressed to AACTE for its role in the conference and in this Guide, and, of course, to the writers of the guides for their full cooperation both during and after the conference.

The Clearinghouse on Teacher Education is pleased to present this guide to the nine models in the hope that it will stimulate extensive study of ways to improve school personnel preparation and thereby the educational opportunities for America's children and youth.

Kaliopee Lanzillotti, Publications Coordinator

Joel Burdin, Director

February 1970

About ERIC

The Educational Resources Information Center (ERIC) forms a nationwide information system established by the U.S. Office of Education, designed to serve and advance American education. Its basic objective is to provide ideas and information on significant current documents (e.g., research reports, articles, theoretical papers, program descriptions, published or unpublished conference papers, newsletters, and curriculum guides or studies) and to publicize the availability of such documents. Central ERIC is the term given to the function of the U.S. Office of Education, which provides policy, coordination, training, funds, and general services to the 19 clearinghouses in the information system. Each clearinghouse focuses its activities on a separate subject-matter area; acquires, evaluates, abstracts, and indexes documents; processes many significant documents into the ERIC system; and publicizes available ideas and information to the education community through its own publications, those of Central ERIC, and other educational media.

Teacher Education and ERIC

The ERIC Clearinghouse on Teacher Education, established June 20, 1968, is sponsored by three professional groups--the American Association of Colleges for Teacher Education (fiscal agent); the National Commission on Teacher Education and Professional Standards of the National Education Association (NEA); and the Association for Student Teaching, a national affiliate of NEA. It is located at One Dupont Circle, Washington, D.C. 20036.

Scope of Clearinghouse Activities

Users of this guide are encouraged to send to the ERIC Clearinghouse on Teacher Education documents related to its scope, a statement of which follows:

> *The Clearinghouse is responsible for research reports, curriculum descriptions, theoretical papers, addresses, and other materials relative to the preparation of school personnel (nursery, elementary, secondary, and supporting school personnel); the preparation and development of teacher educators; and the profession of teaching. The scope includes recruitment, selection, lifelong personal and professional development, and teacher placement as well as the profession of teaching. While the major interest of the Clearinghouse is professional preparation and practice in America, it also is interested in international aspects of the field.*

The scope also guides the Clearinghouse's Advisory and Policy Council and staff in decisionmaking relative to the commissioning of monographs, bibliographies, and directories. The scope is a flexible guide in the idea and information needs of those concerned with the pre- and inservice preparation of school personnel and the profession of teaching.

How To Use This Guide

Each guide has this general outline: overview, program goals and rationale, selection procedures, professional preservice component, relationship of professional component to academic component, inservice component, faculty requirements and staff utilization, evaluation component, program management, and summary. The Teachers College guide, which was not written at the conference, is the only one with a different outline.

In the Government Printing Office (GPO) edition of the models, some of the pages were numbered differently from the original reports which were processed into the ERIC system. For the readers' convenience, the footnotes to the guides include the page references to both the GPO and ED (ERIC) editions. If the page references in the footnotes were the same for both editions, only one set of page numbers is given.

"ED" or order numbers for the models appear along with the prices and other information in the introduction. Ordering information about other references in the ERIC collection would appear in the bibliography to each guide.

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Northwest Regional Educational Laboratory

OVERVIEW

The ComField (competency-based, field-centered) model of an elementary teacher education program derives from the primary assumption that prospective teachers should be able to demonstrate prior to certification the functions that they are expected to be able to perform after certification, e.g., bringing about given learning outcomes with children or bringing about some specified parental involvement in program development. As such, a model based program requires (1) that the functions to be performed by teachers in given settings be specified,(2) that the behaviors or products of behavior that are acceptable as evidence of the ability of prospective teachers to perform those functions be specified, and(3) that the teacher education program in fact leads to the ability of prospective teachers to perform the functions specified in (1) as measured by the indicators specified in (2).

Four additional assumptions underlie the model:

1. That prospective teachers should be able to demonstrate prior to certification that they are independent, self-directed learners and that they can adapt to new situations that demand new patterns of behavior.
2. That a teacher education program must be relevant personally to those going through it, that is, it must accommodate individual differences in learning rates, styles, objectives, etc.
3. That a teacher education program must be responsive to the needs of a pluralistic society by preparing prospective teachers to function within a wide range of social contexts.
4. That if a teacher education program is to be genuinely responsive to the needs of a pluralistic society, that is, if it is to prepare teachers to be able to function within a broad range of local educational programs, it must provide for community participation in its own definition and operation.

Finally, the model rests upon a commitment to the methodology of systems design. Generally speaking, the application of systems design principles means that each of the functional parts within the model, as well as the model as a whole, assumes three characteristics: (1) it is designed to bring about a specified and measurable outcome, (2) it is designed so that evidence as to the effectiveness with which it brings about its intended outcome is continuously available, and(3) it is designed to be adaptive or corrective in light of that evidence. This is the case whether the part in question is a segment of instruction within the program, a segment of the procedure developed to personalize the program, or the personalization procedure as a whole. As such the model represents a process or way of proceeding. It is goal-oriented, characterized by corrective feedback

loops, etc. In short, it is a process that requires its user to know what it is that he wants to accomplish, order events in such a way that he has some probability of accomplishing it, assess whether the specified events do in fact accomplish that which they are intended to accomplish, and if they do not, modify them until they do. This process is represented schematically in figure 1.

Given its defining characteristics, ComField can best be described as a model of an elementary teacher education program that is systematically designed, personalized, competency-based and field-centered.

Four kinds of products have evolved from work on the model:

1. General specifications for the model.
2. Specifications for the application of the model to specific teacher education programs.
3. Statements of rationale in support of both sets of specifications.
4. Exemplars that illustrate how various elements within an operational teacher education program might look if they were designed according to the specifications.

These are summarized in volumes I, II and III of the Final Report. In reviewing these products the reader should keep in mind the interpretations by the ComField planners of the meaning of the concept "specifications." Broadly speaking, specifications refer to a set of statements that designate what is to be included in or excluded from a process or thing. This is complicated by the fact that the nature of the product or process to be developed sets constraints upon the nature of the specifications that are to be drawn up for it. If a product is a specific dam, for example, at a specific location on a specific river, and the dam has a specific set of functions to perform, specifications have to be written to take all of these factors into account. If, on the other hand, the product is to be a model of a dam that can be built under a variety of conditions to serve a variety of functions, then specifications are of quite a different nature. In the opinion of the ComField planners, specifications for the ComField model were to resemble specifications for the model of a dam. The charge was to develop specifications for a model of a teacher education program that could be applied in a variety of specific situations rather than to develop a situation-specific, operational, "model" teacher education program. Given this interpretation, two levels of model have been developed: (1) those defining the general features of the model, and(2) those defining its application to situation-specific programs. The former set constraints upon the latter, and the latter set constraints upon the developers of a specific, operational program, but they do not dictate the specifics within those constraints. The specifics of any program must be the prerogative of those immediately responsible for its development.

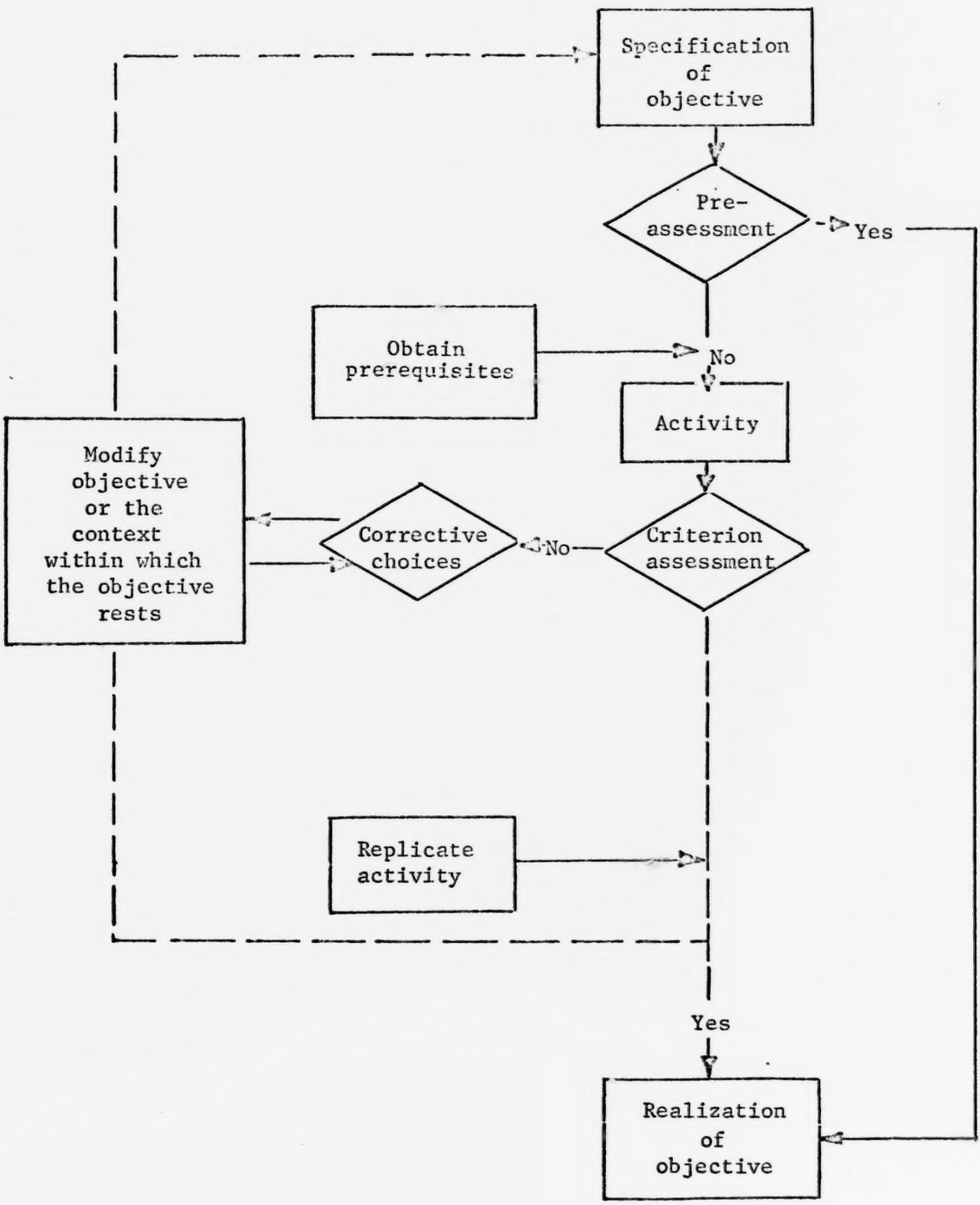

FIGURE 1

A SCHEMATIC REPRESENTATION OF THE ADAPTIVE PROCESS REFLECTED THROUGHOUT THE COMFIELD MODEL

The basic concepts involved in and the operations dictated by the ComField model are summarized in the paragraphs which follow.

The Development of Program Objectives

As indicated, the goal of the ComField model is to prepare teachers to be able to perform the various functions required of them in the elementary schools of the 1970's and '80's. Three steps are needed to translate this goal into operational program objectives:

1. Specify what elementary education will be like in the 1970's and 80's.
2. Specify the functions to be performed within such an educational context, for example, managing instruction, contributing to instructional systems development and evaluation, etc.
3. Specify the tasks to be performed within each function in order to carry it out. As used in the ComField model, tasks that teachers are to perform are defined in terms of the outcomes to be realizedin the school setting.

Such a conception of teaching tasks represents a major departure from most analyses of objectives that accompany teacher education programs and is critical to the operation of the ComField model. Thus, the designer of a teacher education program is forced to specify the objective of the educational enterprise at the elementary school level as a basis for the development of his teacher education program. This includes the classes of pupil outcomes to be derived from the educational program and the outcomes to be achieved through working with parents or with peers in curriculum development and evaluation, etc. Although it represents an extremely rigorous requirement in program development, it is a necessary one if the major assumption on which the model program rests is to be met with candor and if education and teacher education are ever to move away from the position that the performance of certain classes of activity on the part of teachers (for example, asking questions, administering tests, giving information through exposition, and guiding reading in a workbook) are sufficient in and of themselves to bring about learning in children or are sufficient in and of themselves as evidence of a prospective teacher's ability to bring about learning in children.

One consequence of this requirement is the burden of responsibility it places upon those in the teacher education program to develop reasonable and valid task specifications. This is particularly critical with respect to the classes of pupil outcomes that are to derive from an elementary education program, for the welfare of children, the community, and nation are at stake. Because of this critical issue, the ComField model specifies that a mechanism (an educational objectives commission?) be established at the state level with strong representation from local communities, schools, and colleges to work toward the development of a taxonomy of outcomes appropriate to the function of elementary education in 1970's and 80's. In addition, the model specifies that all decisions as to such outcomes must be reflected

against (1) what is known about human development and behavior, (2) what is known about the present social and cultural context, and (3) what is known about the nature of alternative future social and cultural contexts. The basic assumption underlying the development of such a mechanism is that by hitting the issue head on, by doing so with broad representation within a state or a region, and by reflecting the deliberations of such a group against that which is known in the social, behavioral, and biological sciences, the best set of objectives will be derived, and they will have the best chance of being accepted by parents, local school districts, departments of education, etc. While such a taxonomy would of necessity be subject to continuous change, both as a consequence of changing demands of the social system and changing knowledge of human development and behavior, it represents a place to begin. Without such a beginning, a ComField-type teacher education program cannot function.

The Development of the Means To Assess the Realization of Program Objectives

The program must become serious in its effort to obtain evidence of the ability of prospective teachers to perform the tasks prior to certification that they will need after certification. Operationally, this requires that prospective teachers be able to demonstrate that they effect changes in the behavior of pupils that reflect desired educational outcomes before they assume responsibility for guiding the learning of children. The same rationale holds with respect to demonstrating the ability to perform noninstructional tasks, for example, the ability to bring about desired outcomes in conferences with parents or to bring about desired outcomes in curriculum development efforts with peers. Evidence as to the ability of prospective teachers to perform these tasks rests, respectively, with changes in the attitudes, feelings, or behavior of parents and with revised, extended, or newly created curricula.

After having specified the tasks, three steps are involved in developing procedures which will permit the assessment of competence in the performance of those tasks:

1. Specify the behaviors or products of behavior in the target population, i.e., in children or parents or curriculum, that are acceptable as evidence of competence in the performance of a given task.
2. Specify the procedures by which reliable observations of (1) can be obtained.
3. Develop the measures specified in (2) to the point where there is evidence that they do in fact provide reliable observations of (1).

The concept of competence in a ComField-type teacher education program is extremely complex and has far-reaching implications for assessment. When applied to the development of learning outcomes for children, the demonstration of competence means, operationally, that a prospective teacher is able to bring about a given learning outcome for a given pupil or set of pupils who have given characteristics in a given instructional setting. Four sets of variables are always interacting in any demonstration of competence as a teacher of children: (1) the pupil outcome desired, (2) the characteristics

of the pupils which interact with instructional conditions to effect outcome, (3) the characteristics of the instructional setting which interact with both pupil characteristics and instructional conditions to effect outcome, and (4) the nature of the instructional act per se. In ComField, the term instructional act always includes reference to the content of and the strategy represented by an instructional behavior. Much the same set of operations are involved when referring to competence in the performance of noninstructional tasks: to demonstrate competence in parent conferences, for example, a prospective teacher must be able to demonstrate that he can bring about a given outcome for a given parent within a given context.

Since the demonstration of competence with a ComField-type program requires an appropriate mix of teacher behavior in relation to outcome, characteristics of the target population, and characteristics of the setting, competence is always situation specific. It can be judged only in terms of a specific mix of such variables. As a consequence, competence cannot be thought of in an abstract or generic sense; competence in instruction must always be thought of in terms of the ability to bring about a specific outcome for a specific child or set of children who have specific characteristics and who are operating in a specific instructional setting. Competence is getting a 6-year-old child in a class of 10 who is bright, but visually handicapped, to discriminate between all letters of the alphabet, or in getting a 13-year-old boy of average ability in a class of 30, with little exposure to cultures other than that reflected in his own relatively isolated mountain community, to place value in cultures other than his own.

Such an approach to the meaning of competence has major implications for assessment for the number of specific situations within which competencies can be demonstrated are essentially without end. Operationally, this requires that the strategy of assessment involve the demonstration of competence in situations which appropriately sample classes of outcomes for classes of target population within classes of educational settings. A basic assumption underlying the program is that each prospective teacher will be able to negotiate the specific situations in which he is to demonstrate competence, and that these will reflect the type of situations that he will be encountering in the setting within which he chooses to teach.

The Development of Learning Experiences Which Assure the Realization of Program Objectives

Having specified the acceptable tasks and behaviors or products of behavior in the target populations that are evidence of the ability to perform those tasks, the systematic development of a competency-based teacher education program then requires:

1. The identification of the necessary conditions to bring about the successful performance of a task, i.e., to bring about the outcomes expected in the educational setting.
2. The specification of the knowledge, skills, and sensitivities that are needed by teachers to provide the conditions outlined in (1).

3. The specification of the conditions by which the knowledge, skills, and sensitivities needed by teachers to perform their various school tasks can be developed.

Once (3) is known it then becomes possible to design and develop the learning experiences that constitute the teacher education program. The sequence of steps involved in the systematic design of a ComField-type program is illustrated in figure 2.[1]

Caution should be introduced at this point. While the logic of the steps outlined in carrying out the systematic design of a teacher education program is clear, the information base that exists in the fields of education and psychology on which the design of such a program depends is extremely limited. With few exceptions, there simply are no tested, empirically based instructional principles that speak to the conditions that give rise to specific classes of pupil outcomes for specific kinds of children within specific instructional settings. It is still not possible, for example, to identify explicitly and with confidence the instructional conditions which permit concepts to be mastered, attitudes to be modified, or chronic anxiety to be reduced for various kinds of children in various settings. It is even less possible to specify the conditions for bringing about such outcomes as trust or considerateness or self-understanding. As a consequence, it is not possible to go very far in specifying the knowledge, skills, and sensitivities that prospective teachers need in order to bring about such conditions. The same lack of empirically tested instructional principles exists at the level of teacher education. As a consequence of such a limited knowledge base, the design of the teacher education program must be built as much on the collective wisdom of those who are helping shape it as on firm empirical evidence. To minimize the limitations inherent in such an approach, the model specifies that the methodology of instructional systems design and development should be brought to the task. This is a methodology which permits, through iterative cycling and empirically based feedback procedures, the development of an instructional program which brings about specified outcomes with known degrees of reliability. The concepts of instructional systems design and development are elaborated in the paragraphs which follow.

Designing Instructional Experiences That Have a High Probability of Giving Rise to the Knowledge, Skills, and Sensitivities That Prospective Teachers Need To Perform the Tasks Required of Them for Certification. Because the ComField model is data-based, persons adopting it as a guide to the development of their teacher education program are in the unique position of being able to insist that known kinds and amounts of learning

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[1] The reference in figure 2 is limited to pupil outcomes and the instructional tasks of teachers. As indicated throughout the paper, teachers are required to perform other tasks, and it needs to be noted that the paradigm outlined in figure 2 is as applicable to the design of a program to prepare teachers to perform such noninstructional tasks as it is to prepare them to perform their instructional tasks.

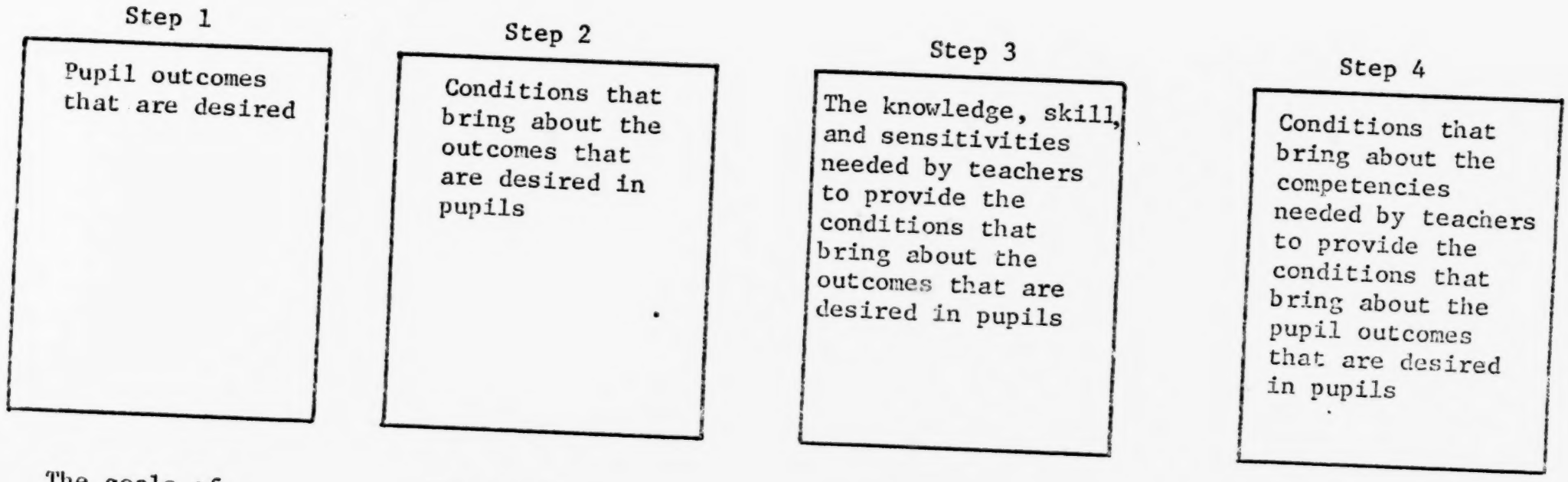
Step 1
Pupil outcomes that are desired
The goals of education
Step 2
Conditions that bring about the outcomes that are desired in pupils
The instructional program within the schools
Step 3
The knowledge, skill, and sensitivities needed by teachers to provide the conditions that bring about the outcomes that are desired in pupils
The goals of teacher education
Step 4
Conditions that bring about the competencies needed by teachers to provide the conditions that bring about the pupil outcomes that are desired in pupils
The teacher education program

FIGURE 2

SEQUENCE OF STEPS IN THE SYSTEMATIC DESIGN
OF A COMFIELD-BASED PROGRAM

take place as a consequence of instruction within their teacher education program. Towards this end and toward the end to making the energy that goes into the development of a ComField-type program maximally useful to the profession, the model specifies that instruction should make use of what has come to be known as instructional systems.

As used in the present context, an instructional system is an empirically developed set of learning experiences designed to bring about a given outcome for given kinds of prospective teachers with a given degree of reliability. The design of an instructional system involves the systematic analysis of that which is to be learned, a systematic structuring of it from the learner's point of view, and the specification of a set of learning experiences which have a high probability of leading the user of the system to a mastery of that which is to be learned. Within the context of teacher education, instructional systems may involve learning experiences which include lectures, small group discussions, reading, observation of films or real life settings, laboratory simulation, microteaching experiences, etc., of explicit performance outcomes that relate to explicit tasks that the prospective teacher is likely to have to perform. Also. no matter what the learning experiences may be, they are always designed with multiple entry points and paths to pursue, permitting students to enter at levels commensurate with their background and progress through them at a speed and in ways commensurate with their learning style.

The design of instructional systems within the context of teacher education requires that one specify both the content and strategy of instruction (learning events) that have the greatest likelihood of bringing about the specified outcome for a given kind of learner (prospective teacher) in a given instructional setting. Such specifications require the matching of the content of a message and the strategy used in presenting it with learner characteristics, learning settings, and outcome. Ideally, as indicated earlier, such specifications should draw upon instructional principles, i.e., empirically established relationships between these sets of variables, but since these do not exist in abundance at present, most such specifications will have to be drawn from wisdom, hunch, and hope.

Developing the Instructional Experiences That Have Been Specified by the Design Function Outlined Previously, Determining Whether They in Fact Achieve That Which They Have Been Designed To Achieve, and If They Do Not, Recycling Their Design, Implementation, and Testing Until They Do. Once an instructional system has been designed it must still be developed and tested for its effectiveness. The developmental process is cyclical and empirical: instructional macerials are prepared, piece by piece or unit by unit, tested for their effectiveness, and modified as needed until individually and collectively they bring about the learning outcome for which they are intended. As systems are developed, tested and used data is accumulated as to their effectiveness with given kinds of learners. Ultimately, each instructional system is available in a form that permits it to be marketed and thereby used throughout the profession.

The Development of Personalizing Strategies Which Assure the Relevance of the Program to Those Who Are in It[2]

Individual differences in the learning patterns, capabilities, and preferences of students in a teacher education program must be more than recognized. They must be taken into account fully in the design of such a program. At the time the ComField model was first described, concern for individual differences focused primarily on the design of instructional systems with multiple entry points and critical paths along which students could move, multiple media forms so that information processing preferences could be pursued, rate of progress through a system or through the full contingent of systems being under the control of the student, opportunity to develop an idiosyncratic teaching style, etc. Further work with the model has suggested that the personalization of a teacher education program requires a number of elements. These include an opportunity for students, within established limits, to:

1. Contribute meaningfully to the design and development of the program.
2. Negotiate that which they wish to take from the program.
3. Negotiate the settings within which the competencies negotiated in (2) are to be demonstrated.
4. Negotiate the criteria by which judgment is to be made about competence.
5. Continuously assess the relevance of the objectives that have been negotiated, and the relevance of the educational experiences being pursued in relation to those objectives.
6. Develop a minimal level of self-understanding as a basis against which to make such judgments.
7. Develop an overall "style" of teaching that is in concert with one's self-understanding.

Each step in the personalization process is elaborated in the following paragraphs.

An Opportunity for Students To Contribute Meaningfully to the Design and Development of the Program. A basic assumption underlying the development of a ComField-type program is that the program's parameters are to be determined jointly by faculty from the colleges and schools, students in teacher education, and representatives from the broader community where appropriate. By pursuing such a strategy, it is assumed not only that the parameters and the criteria for judging their success will be more acceptable to all, but that the quality and relevance of the program for those within it will be maximized.

An Opportunity for Students To Negotiate That Which They Wish To Take from the Program. Within the overall program, each student needs to be

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[2]This aspect of the model has been extended significantly by the Oregon group.

able to negotiate an individual program that is maximally relevant to him. Operationally, this means that the content of each program will vary by interest, specialization, background of knowledge and skill, personal learning styles, etc. It also means that students and staff must arrive at a program of work that is mutually satisfying, given the information and range of choices available at any given point in time. It is anticipated that both short- and long-term contracts will evolve from negotiations, and that both will be subject to modification at any time through further negotiation. At this point, there are no guidelines that indicate how many functions or tasks prospective teachers must be able to perform, but it is generally assumed that some representative sample of tasks within all functions will be established as a minimum base against which to negotiate.

Two further requirements must be met if a personalized program is to be effective: (1) vast amounts of information on interests, performance history, etc., must be available to students and staff upon call so that informed decisionmaking can be pursued, and(2) staff must have the sensitivities and capabilities that permit meaningful negotiation. Hopefully, the first can be accomplished by a computer-based information management system and the second by staff selection and training.

An Opportunity for Students To Negotiate the Settings Within Which Competence Is To Be Demonstrated and To Negotiate the Criteria by Which Judgment About Competence Is To Be Made. Once a prospective teacher has identified the broad classes of tasks on which he wishes to demonstrate competence, he then must negotiate the conditions or setting within which he will demonstrate his competence. This requires that he specify clearly the nature of the objective he is attempting to realize in the demonstration situation, the kind of learner or learners to be involved in the situation, and the physical characteristics of the setting in which he will work. The prospective teacher is also responsible for negotiating the behaviors or products that can be looked to in the situation as evidence of his success in bringing about his objective. Once this level of detail has been made explicit and agreed to, the task of the prospective teacher and the person responsible for assessing his performance becomes manageable and relatively straightforward. The same strategy is followed in meeting prerequisite skills, knowledges, and sensitivities. It is to be recognized, however, that certification is linked only to the demonstration of terminal competencies; prerequisite knowledge and skills are seen only as means to an end and are attended to primarily for diagnostic or guidance purposes.

An Opportunity for Students To Assess Continuously the Relevance of the Objectives That Have Been Negotiated and the Relevance of the Educational Experiences Being Pursued in Relation to Those Objectives. In order to insure maximum relevance of both the ends being pursued in the program and the means used to obtain those ends, all instructional systems are to contain an element which forces the prospective teacher to assess the meaning of that being pursued, his commitment to it, and its implications for the development of an evolving teaching style. This is

the case whether the student is successful or unsuccessful in demonstrating the criterion performance toward which the instructional system aims. The procedure by which this is accomplished is a corrective decision loop that is attached to all instructional systems. Operationally, the corrective decision loop is brought into play whenever there is reason to believe that that which is being pursued is without meaning or there is failure in the demonstration of criterion performance. When this is the case, the student is channeled into the corrective decision loop where he is able to explore through conference the relevance or meaning of either the ends or the means to the ends that he is pursuing. Oftentimes the difficulty in finding meaning in an experience is a matter of not having understood that which needs to be understood. When this is the case, the student is cycled through an enabling subsystem or recycled through the learning experience just attempted. The critical point is that a mechanism to facilitate the personalization process is a part of every instructional experience, and when the relevance of instruction is unclear or unsuccessful, it is always brought into play.

An Opportunity for Students To Develop a Minimal Level of Self-Understanding as a Basis Against Which To Make Such Judgments. A basic assumption underlying the entire personalization effort in the ComField model is that the wisdom of decisions made in a program of this kind is directly related to the degree to which one has a clear understanding of his own goals, commitments, preferences, etc. Toward this end, the primary point of departure in the program and a continuing thread throughout it is the systematic effort to bring about self-understanding.

An Opportunity for Students To Develop an Overall "Style" of Teaching That Is in Concert with Their Self-Understanding. Not only do prospective teachers learn differently, but they learn different things and put similar things together in different ways. In bringing about pupil outcome A, for example, one teacher may use instructional behaviors x, y, and z; another teacher may use behaviors v, w, and x--yet both teachers may be equally successful in bringing about the desired outcome. To be ultimately effective a teacher education program must allow for and in fact nurture such differences. The proposed model teacher education program does so by insisting that each prospective teacher provide evidence of an integrated, idiosyncratic teaching style. This requires that the prospective teacher be able to explicate his style, be able to provide a rationale in support of it, and be able to demonstrate it consistently under simulated and actual teaching conditions.

The Development of Field Relationships Which Assure the Relevance of the Program to Those Who Are Its Ultimate Consumers

By insisting that prospective teachers be able to demonstrate that they can perform specified tasks under field conditions prior to certification, personnel in public schools must of necessity become full partners in the teacher education program. Operationally, it requires both their representation in all decisionmaking that affects program operation and participation in the instructional program per se. As it presently

stands, the model specifies that prospective teachers demonstrate competence under two conditions: (1) under laboratory or simulated conditions prior to entry into the ongoing classroom situation, and (2) under ongoing classroom conditions. As used in the ComField model, simulated conditions refer to any instructional context that is less complex than that encountered in the ordinary classroom. As the model now stands, it specifies that instruction in the knowledge, skills, and sensitivities needed to perform the required tasks, and the demonstration of competency in their performance under simulated conditions is, primarily, the responsibility of the college or university. Once criterion performance has been demonstrated under laboratory or simulated conditons, the prospective teacher is then free to enter the practicum. Here he stays until he is able to demonstrate competence within the context of the ongoing instructional environment. Generally speaking, school personnel are responsible for the practicum phase of the training.

The rationale underlying the division of responsibility between colleges and the schools in the teacher education program is straightforward: The college is probably better suited than the school to assume responsibility for the development of the knowledge, skills, and sensitivities needed to demonstrate competence in the performance of teaching tasks in the laboratory, and the school is probably better equipped to handle both instruction and assessment relative to the demonstration of competence in the performance of teaching tasks under ongoing classroom conditions.

Two assumptions underlie the requirement of competence demonstration under laboratory or simulated conditions prior to assuming responsibility for guiding the learning of pupils in the classroom: (1) there should be opportunity to perform the required tasks initially under circumstances where the complexity of the teaching-learning situation is somewhat simplified, and (2) there should be evidence that prospective teachers are able to work profitably and constructively with children in a minimal risk situation before they assume responsibility for their learning in an actual situation.

The commitment to having school personnel share equally in the definition and operation of a teacher education program has far-reaching implications for the structure and organization of both schools and colleges. Operationally, mechanisms will have to be established which permit equal participation in:

1. Establishing the competencies that are to be demonstrated under laboratory conditions.
2. Establishing the behaviors or products of behavior that are acceptable as evidence of those competencies.
3. Confirming the demonstration of competence under laboratory condition.
4. Establishing the competencies to be demonstrated under live classroom conditions.
5. Establishing the behaviors or products of behavior that are acceptable as evidence of those competencies.

6. Confirming the demonstration of competence under field conditions.
7. Representation in all policy matters relating to the teacher education program.

One major consequence of a program so designed is the far-reaching implications it has upon the functions which staff within both schools and colleges will have to play. Staff within the college setting will have to become involved in contract negotiations, performance assessment, guidance, the development of instructional systems, involvement in instructional functions. These represent far-reaching changes in relation to that which now exists, but even greater changes will have to occur on the part of staff within schools. In contrast to being relatively passive hosts to "student teachers," the schools will become actively involved at all levels of decisionmaking relative to the program, and they will assume major responsibility for instruction and assessment within the practicum phase of the program. This calls for the development of a function within the schools that does not now exist and the creation of staffs that have a set of competencies that they currently do not possess. The assumption of responsibility for this function will require major change in the operation of schools, a redistribution of resources, and a major involvement in an inservice education program as a means of preparing persons to assume their new and enlarged responsibility for instruction and assessment. On the basis of evidence now available, it is probable that the combined inservice education program needed by colleges and the schools to support a teacher education program of the kind described will require as many resources as will the preservice program.

The Development of an Instructional Management System Which Assures That the Support Functions Needed To Carry Out Such a Program Are Available

Every instructional program has to be managed. In most programs these functions are taken as a matter of course; administrators, registrars, counselors, and maintenance personnel are unquestioned elements in program operation. In a ComField-type teacher education program, these same supporting functions must be provided, but because of the performance-based, individually paced, personalized and largely self-instructional nature of such a program, they must be provided in a markedly different form. In order to operate, a ComField-type instructional program requires eight support functions:[3]

1. Personnel selection and training.

[3]The support functions refer only to those that must go on within the management system; they do not speak to who performs those functions or the manner in which they should be carried out. For example, the function labeled "policy and adapation" indicates that the functions of establishing ComField policy, translating policy into operational guidelines, deciding upon new and/or modified program operations, carrying out inter- and intrainstitutional coordination, etc., must be accomplished. The model does not specify the nature of the organizational structure needed to carry out out those functions.

2. Maintenance of equipment, supplies, and facilities.
3. Development of instructional systems for use in the program. and the pursuit of the basic research needed in support of that function.
4. Continuous evaluation of the effectiveness and appropriateness of the program.
5. Continuous adaptation of the program in light of its systematic appraisal.
6. Cost accounting of the program.
7. Execution of the program.
8. Maintenance of an information management system that permits all of the above to occur.

Each of the management functions are elaborated in the paragraphs which follow.

Personnel Selection and Training. The personnel function is responsible for meeting all personnel needs in a ComField-type teacher education program. This includes the recruitment, screening, selecting, and training of instructional and support staff. It also includes the recruitment, screening, and selecting of students. Student advisement and counseling activities are planned and coordinated with the instructional program. All staff training needs, both in the college and the school setting, are carried out within the context of this function.

Maintenance of Equipment, Supplies, and Facilities. The title describes this function sufficiently. It is to be noted, however, that the space, facilities, equipment, and materials needed in support of a ComField-type program take much different form and will require much closer management than they do in traditionally structured teacher education programs.

The Development of the Instructional Systems To Be Used in the Program and the Pursuit of the Basic Research Needed in Support of That Function. The steps involved in the design and development of institutional systems have been spelled out so nothing more needs to be added here. Research in support of instructional systems development will take the form of a search for "instructional principles," that is, the instructional contents and strategies that bring about given kinds of outcomes for given kinds of pupils in given kinds of settings.

The Evaluation Function. Since a ComField-type program is designed to be adaptive, it must possess the means for being responsive to both emerging problems and changing needs. Toward this end at least four kinds of evaluative data are needed.

1. The appropriateness of the pupil outcomes identified as guides in determining the sensitivities and capabilities that need to be developed in prospective teachers in order to bring them about. (Are the ultimate objectives of the program the correct ones?)

2. The effectiveness of teachers who have given sensitivities and capabilities in bringing about the outcomes desired in pupils. (Are the sensitivities and capabilities that have been identified as being needed to bring about given outcomes in pupils the correct ones?)
3. The effectiveness of instructional systems in bringing about the sensitivities and capabilities for which they were designed. (Are the procedures used in the teacher education program effective?)
4. The impact of the teacher education program beyond its immediate influence on teachers and pupils. (Is the school or larger social system changed as a result of the program?)

The means for making such judgments depends upon a comprehensive evaluation system.

The Policy-Adaptation Function. The policy function is the highest level decisionmaking process represented in a ComField-type instructional program. Representation at the policy level must include persons from the college, the schools, professional educational agencies, and the public-at-large. The adaptation function is responsible for regulating the operation of a ComField-type program. Efforts are given to translating broad policy into operational guidelines, designing new and modified program operations, and carrying out inter- and intrainstitutional coordination. The adaptive function must have representation from both the instructional and support components within the teacher education program and from other professional and special resource personnel as needed to carry out the adaptive function.

The Costing Function. From what has been described thus far, it is clear that management decisions in a ComField-type program become extremely complex. It is also likely that they will become increasingly sensitive to the pressures of economics, for as the costs of education outdistance the resources allotted to it, managers of the program will be forced to maximize system effectiveness and minimize system costs. Managers of a ComField-type program must also demonstrate favorable cost-benefit ratios. A basic assumption underlying the ComField model is that both cost effectiveness and cost benefit data must be made available to those who support the program. Specifically, the model assumes (1) that educators have an obligation to provide taxpayers and legislators cost benefit information so that they can make informed judgments relative to program support when asked, and(2) that managers of a ComField-type program must have cost effectiveness information in order to make informed judgments as to program operation, priorities, etc.

To obtain data of this kind three costing capabilities must be available:

1. Data that derive from straightforward cost accounting
2. A procedure for deriving cost effectiveness data
3. A procedure for deriving cost benefit data.

Program Execution. The execution function is responsible for seeing that policies are translated into operational guidelines and then carried out. Labels traditionally used to describe this function are "management" or "administration."

The Information Management Function. The information demands within a ComField- type instructional program are extremely high. As students progress through an instructional system, they must have information that permits them to make appropriate choices as to next learning steps; advisors must be able to call up performance history, etc. Information needs are also high within the management effort. Instructional systems development personnel must have performance records for each system and/or subsystem. Cost/benefit and program evaluation data must be available upon call by those responsible for the adaptation or execution of the program, etc. To meet these demands, a computer-based information management system needs to be used as the primary means for the storage, retrieval, transmission, and display of information within the program. Model specifications require that natural language be used in interacting with the computer.

The relationship between the ComField management and instructional systems is illustrated schematically in figure 3. Three objectives of the management system are reflected by the organizational structure:

1. To keep the instructional program squarely in the center of things and thereby insure as well as possible that the support units remain as support units rather than becoming focal points within the program.
2. To provide maximum opportunity for information and directional influence to flow both from the instructional component to the support components and vice-versa.
3. To provide for a continuous flow of information to the policy-adaptation component, and hence to the program execution component.

While such a model cannot guarantee that all units within a ComField-type program will act in concert and in support of the instructional program, it does provide an operational framework which at least makes it possible.

A Summary of the Contributions Expected To Derive from the Comfield Model

By adopting the ComField model, an elementary teacher education program is in the unique position of being able to provide (1) evidence that a prospective teacher is able to perform the tasks that he is expected to perform prior to assuming responsibility for the teaching of children, (2) the means whereby schools can become intimately involved in the preparation of persons responsible for their operation, (3) the means whereby prospective teachers can contribute significantly to the shaping of the curriculum that is to guide their professional development, (4) the means whereby a college educational experience has personal relevance, (5) the support systems needed to carry out such a program, and (6) evidence as to

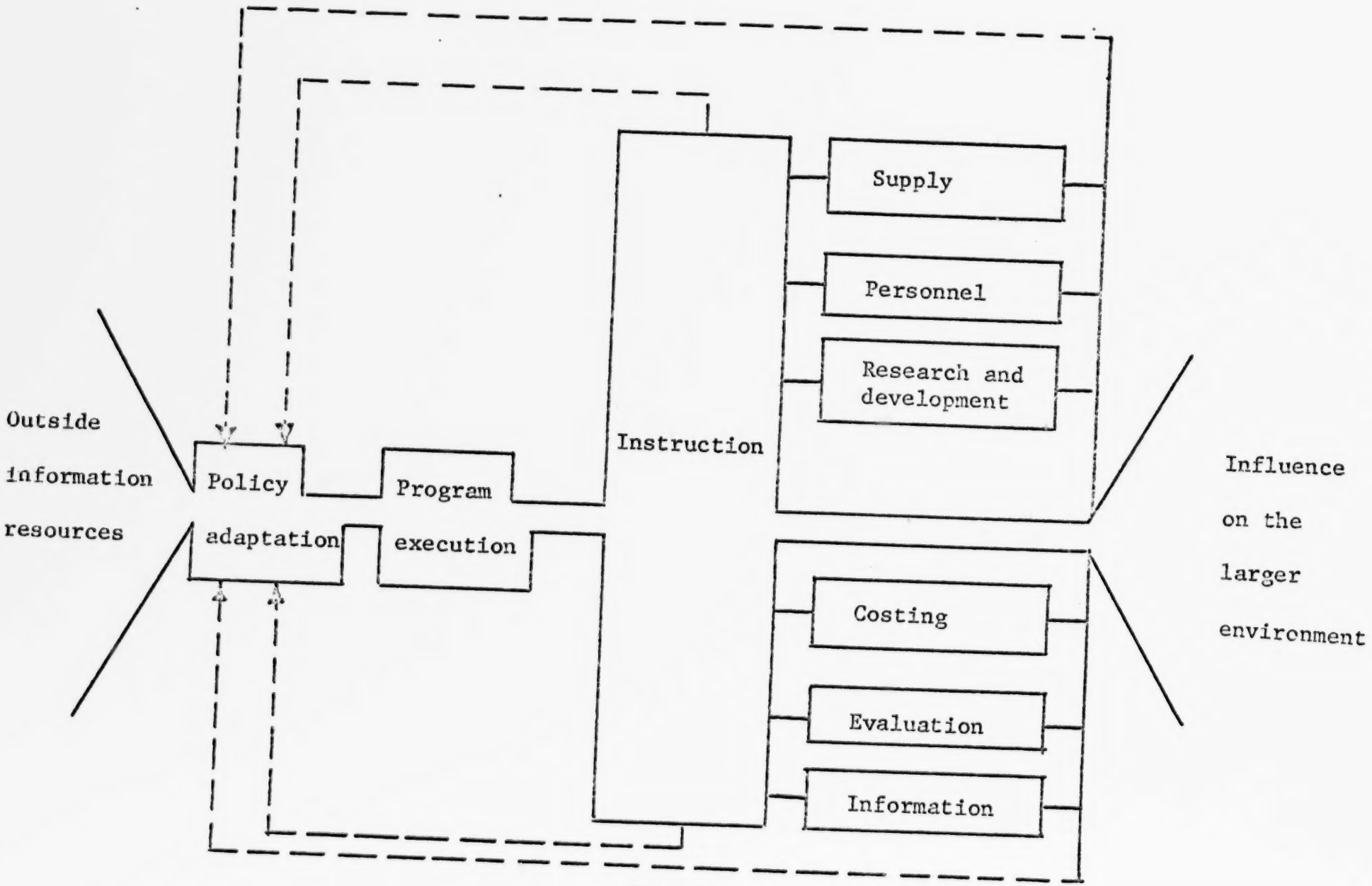

FIGURE 3

A SCHEMATIC DIAGRAM OF THE COMFIELD MANAGEMENT SYSTEM

the cost, effectiveness, and benefit derived from such a program. It is also anticipated that two second-order outcomes will occur from a program so conceived: (7) that prospective teachers will develop into independent, self-directed, continuing learners themselves, and(8) that the systematization and personalization of instruction will transfer to the education of preschool and elementary children. The basic assumption underlying hope for such a long-range outcome is, simply, that when prospective teachers themselves engage in an educational experience in a way which gives it personal meaning, and when they themselves become independent, self-directing learners, they above all others will be likely to create a similar kind of learning experience for the children they teach.

PROGRAM GOALS AND RATIONALE

The goal of a ComField- type teacher education program is to prepare teachers to perform the various functions required of them in the elementary schools of the 1970's and 80's. The aim of the ComField model is to provide specifications for the development of such a program. As indicated previously, the rationale underlying the model is relatively straightforward: If prospective teachers are expected to be able to perform certain functions upon certification, they should demonstrate that they can perform them prior to certification. It also rests upon the assumption that if teachers are to perform the primary function of facilitating human development, the nature of our present cultural-social context, and the nature of alternative futures, the program which prepares teachers to do this must be clear about the nature of learner outcomes to be nurtured, the nature of the conditions that are required to nurture each outcome, and the nature of the competencies needed by teachers to provide the conditions that will nurture each outcome.

SELECTION PROCEDURES

The ComField model has no restrictive specifications relative to who may enter the teacher education program. Anyone who has been admitted to a college that has adopted the ComField model as a basis for its teacher education program will have established college entry criteria, and it is assumed that students who meet them are sufficiently qualified for entry into the initial phases of the teacher education program. This is not to imply, however, that acceptance in the program means that a student is also accepted as a good risk as a prospective teacher. The philosophy underlying the ComField model, however, is that anyone who meets the minimal requirements of entry into a college that has adopted the ComField model should be free to enter the teacher education program and attempt to meet its requirements. It is also assumed that such entry may be made at any point in one's life and from any substantive background.

Whether a person in the program succeeds within it depends on his ability to perform the criteria specified for exit from it, including those which pertain to self-understanding and the development of an idiosyncratic teaching style. If these criteria are met, independently of

how long it takes to meet them, he will receive certification; if they are not met, and those in the program decide ultimately that there is little likelihood of their ever being met, a student may be asked to leave the program without full certification. Under no conditions, however, are these judgments to be made prior to each student having full opportunity to demonstrate his ability to meet the criteria set for certification.

THE PROFESSIONAL PRESERVICE COMPONENT

The underlying task of the professional preservice component in a ComField-type teacher education program is to prepare prospective teachers to be able to demonstrate that they can perform under laboratory and practicum conditions, that they can bring about the desired outcomes in children, that they can perform the noninstructional tasks required of teachers, and that they have developed a recognized and defensible teaching style. In addition, the model requires that each prospective teacher demonstrate competence in the application of what has been termed general adaptive and interpersonal strategies. An assumption of the model is that this last class of competence will facilitate the application of the first three classes mentioned. As indicated previously, the ComField model does not specify the specific competencies to be realized from the program--this is the prerogative of the institutions or the states or the regions that adopt the model. The model does specify, however, how such competencies are to be determined and what they will look like generally once they are determined. It is on this basis that a general outline of the nature of the professional preservice component is offered.

Before describing this component of the program, however, the reader should be sensitized once more to the conception of teaching tasks and the conception of competence in the performance of such tasks assumed by the model. It will be recalled that, for purposes of the ComField model, a task is defined as bringing about a specified outcome under a given set of conditions, and competence is defined as the ability to bring about such tasks. When applied to the development of learning outcomes in children, a competency means, operationally, that the prospective teacher is able to bring about the specified learning outcome for a given pupil or set of pupils who have given characteristics in a given instructional setting. The same holds when referring to competence in the performance of noninstructional tasks: to demonstrate competence in conferences with parents, a prospective teacher must demonstrate that he can bring about a given outcome for a given parent in a given context. The demonstration of competence, therefore, is always characterized by an appropriate mix of influence behavior, desired outcome, characteristics of the target audience, characteristics of the setting within which influence behavior occurs, and requires for its demonstration an appropriate sampling of outcomes for given target populations across given classes of educational settings.

Given such a point of view about teaching tasks and competence in the performance of such tasks, the professional preservice component of a

ComField-type program centers around two kinds of information:

1. Principles of instruction or principles governing the performance of noninstructional tasks, that is, empirically tested statements of the relationship between desired outcomes, the characteristics of target populations, the characteristics of educational settings and influence strategies.
2. The knowledge, skills, and sensitivities that are prerequisite to the application of the principles specified in (1).

Unfortunately, as indicated elsewhere, the information base available in the field of education and the behavioral sciences is such that principles of instruction are still lacking. With few exceptions there simply are no tested, empirically based principles that speak to the conditions or operations that give rise to specific classes of pupil outcomes within specific instructional settings or specific kinds of parent outcomes within parent education settings. For the present, the designers of the ComField model were forced to deal with information within the professional preservice instructional program much as it has always been treated, namely, to provide prospective teachers with relevant batches of information and subskills and then require them to demonstrate that they can then make appropriate mixes of this information in demonstrating the criterion competencies required for exit from the program. The limitations of such a procedure are clear: Prospective teachers are provided only with sets of knowledges and skills that are in some way involved in and prerequisite to the performance of specific tasks they then are forced to "find," through trial and error application of alternative instructional acts, combinations which prove to be effective mixes of this information relative to situation-specific tasks encountered.

The ComField model specifies that content relevant to four sets of competencies be included in the preprofessional program:

1. Content relevant to the development of competencies needed to bring about desired outcomes in pupils.
2. Content relevant to the development of competencies needed to perform noninstructional tasks.
3. Content relevant to the development of adaptive and interpersonal competencies that enhance (1) and (2).
4. Content relevant to the development of competencies which permit the personalization of (1), (2), and (3).

The specific blocks of content which relate to the development of these specific sets of competencies are summarized in figure 4.

As with specific competencies to be realized from an elementary teacher education program, the ComField model does not specify the specific content within the various blocks of content identified in figure 4. To the developers of the model, this too seemed to be the prerogative of the institutions adopting the model. A detailed set of specifications relative to how content is to be used within a model-based program do exist, however.

Content relevant to the development of competencies needed to bring about desired outcomes in pupils	A taxonomy of pupil outcomes	Conceptual frameworks for teaching subject matter needed to bring about selected pupil outcomes	Characteristics of pupils which interact with content and strategy to effect outcomes	Content relevant to the personalization of professional competencies
		Instructional strategies needed to bring about selected pupil outcomes		Self-understanding
			Interpersonal competencies	Commitment
Content relevant to the development of interpersonal or enhancing competencies	General adaptive competencies			Teaching style
Content relevant to the development of competencies needed to perform non-instructional tasks	A taxonomy of noninstructional tasks to be performed by an instructional manager	Ability to work as a team member in research and evaluation, instructional systems development, and the supervision of assistants; ability to utilize computers and electronic media in instruction	Ability to conference with parents, work with parents, work with peers, establish school policy, pursue administrative tasks such as maintenance of records, etc.	

(All blocks of content can be adapted equally well to the preparation of I.M.'s at the preschool, primary or elementary levels.)

FIGURE 4

A CONCEPTUAL FRAMEWORK WHICH SUMMARIZES THE MAJOR BLOCKS OF CONTENT WITHIN THE COMFIELD INSTRUCTIONAL PROGRAM

and may be found in the Final Report.[4] Examples of specific blocks of content are provided in volumes II and III of the Final Report.

In addition to specifying the content of the professional preservice component, the model also specifies that mastery of the subject matter underlying instruction around disciplines be obtained in the general education program, that mastery of the blocks of content outlined above be obtained in the foundation-laboratory phase of the professional education program, and that the ability to apply these enabling knowledges, skills, and sensitivities in the performance of criterion competencies be demonstrated under simulated and real life educational conditions. As spelled out earlier, simulated conditions refer to any instructional context that is less complex than that encountered under ordinary classroom conditions, and once criterion performance has been demonstrated under such conditions, the prospective teacher is then free to enter the practicum phase of the training program. In general, the foundations-laboratory phase of the professional educational program is the responsibility of the college or university, and the practicum phase of training is the responsibility of public school personnel. The relationship of the major blocks of content within the preservice professional program are summarized in figure 5 according to phase of the program in which they occur.

RELATIONSHIP OF PROFESSIONAL COMPONENT TO ACADEMIC COMPONENT

Each college has its own set of requirements relative to general or liberal education, and the ComField model specifies that these not only are to be honored, but that the professional preservice educational component must accommodate itself to that college commitment. In some cases this will mean that the model-based elementary teacher education program will have to accommodate itself to a discipline major, an interdisciplinary major, or simply a fixed number of hours in general education subjects. The model makes two additional specification requirements, however, relative to general education:

1. It specifies that all students in the elementary teacher education program will be involved in general-liberal education experiences throughout the course of the preservice program.
2. It specifies that students in the elementary teacher education program will acquire through their general education experiences the knowledge of disciplines that is prerequisite to entry into instructional experiences that lead to mastery of conceptual frameworks for teaching disciplines.

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[4] H. Del Schalock and James R. Hale, A Competency-Based, Field-Centered Systems Approach to Elementary Teacher Education, Final Report, Vol. I (Washington, D.C.: Government Printing Office, 1969), pp. 48-51 and 83.

GENERAL EDUCATION	PROFESSIONAL EDUCATION				
	Foundations-laboratory Phase			Practicum Phase	CAREER TEACHING
Knowledge prerequisite for entry into instructional programs dealing with the conceptual frameworks underlying disciplines	Mastery of repertoires of knowledge that deal with the conceptual frameworks needed for teaching subject matter to young children	Mastery of repertoires of knowledge dealing with the elements and strategies of the teaching act	Demonstration of competencies which bring about desired learning outcomes in children	Demonstration of competencies which bring about desired learning outcomes in children Demonstration of competencies which lead to the successful performance of non-instructional tasks	Knowledge prerequisite to successful performance as a supervising teacher in the practicum phase of Com-Field
	Mastery of repertoires of knowledge essential to the performance of general adaptive and interpersonal skills		Demonstration of competence in the performance of general adaptive and interpersonal skills	Demonstration of competence in the performance of general adaptive and interpersonal skills	
	Mastery of repertoires of knowledge essential to the development of self-understanding, commitment, and a preferred teaching style		Demonstration of behavior acceptable as evidence of self-understanding, commitment, and a preferred teaching style	Demonstration of behavior acceptable as evidence of self-understanding, commitment, and a preferred teaching style	

Prospective IM meets program entry requirements

Prospective IM meets performance requirements for exit from the foundations-laboratory phase

Prospective IM meets performance requirements for exit from the practicum phase

FIGURE 5

A CONCEPTUAL FRAMEWORK FOR SUMMARIZING THE ORGANIZATION OF THE MAJOR BLOCK OF CONTENT WITHIN THE COMFIELD INSTRUCTIONAL MODEL

The model does not make specifications as to the instructional model to be followed in the general education program--it does not specify that instruction in supporting disciplines needs to be performance-based, field-centered, or personalized.

INSERVICE COMPONENT

The ComField model contains two major specifications relative to inservice education:

1. A systematically designed, performance-based, field-centered and personally relevant inservice education program shall be designed and implemented for instructional personnel in the schools that will prepare them to perform as supervising teachers in the practicum phase of the preservice education program.
2. The instructional systems utilized in the practicum phase of the preservice training program will be made available to all experienced teachers in a school district that desire or are required to gain the competencies obtainable through their use.

The first specification commits a school district and other participants in the application of the ComField model to the development of an inservice training program that is no less complex in its development and implementation than is the preservice professional program. It requires an involvement in all of the steps required in designing and implementing the preservice program. At this point, however, the specific set of competencies needed by supervising teachers to carry out the demands of the practicum are unknown, the knowledges and skills prerequisite to their performance have not been identified, and there is no precedent as to how long it will take to develop mastery of such competencies. What is clear is the requirement that such competencies be established within a sizable portion of school personnel by the time preservice students meet criteria for exit from the laboratory phase of the program. Operationally, the development of the inservice program will begin at essentially the same time that the development of the preservice program is undertaken.

The second specification is less binding in that it provides an extension of the training program designed for the practicum phase of the preservice component to inservice teachers only when it is requested by them or when school policy dictates that they master the competencies made possible through those systems. In this sense the specification is provided to meet an obligation should a request for such an inservice training program be made.

FACULTY REQUIREMENTS AND STAFF UTILIZATION

One major set of faculty requirements has already been referred to, namely, the competencies needed in school personnel to permit them to perform the instructional and assessment tasks required in the practicum phase

of the preservice training program. It is estimated that the magnitude of the inservice training program required to develop these competencies in school personnel will be roughly comparable to that involved in the preservice training program. Competencies of the same order of complexity and sophistication will be required of college staff in order to develop and implement the program in the foundation-laboratory phase of the program. As in all other areas, the ComField model does not specify what the competencies are that college faculty will need in order to implement the program. It does spell out, however, how these competencies are to be identified, what they will look like, and how the staff training program generally will proceed in bringing them about. It is anticipated that all staff training programs will involve the systematic design and implementation of a performance-based, field-centered and personalized instruction model.

Staff utilization patterns will of necessity differ considerably from what now exists, in both colleges and schools, in order to implement a ComField-type teacher education program. While it is not possible to predict such patterns until situation-specific programs have been defined, it is possible to anticipate that new differentiations in staff functions will develop. For example, some staff may assume primary responsibility for contract negotiation while others do so for foundation or enabling resources assessment; others may assume primary responsibility for foundations or criterion performance assessment while others do so for instructional systems development. It is even probable that students in the teacher education program will become major participants in instructional systems development efforts, contract negotiations, and enabling resource assessment.

EVALUATION COMPONENT

Within the context of the ComField model, evaluation is thought of as the examination of products and events in light of specified standards for the purpose of making adaptive decisions. Given this definition, the model specifies that four kinds of evaluative data be continuously supplied the appropriate decisionmakers within the model-based program:

1. Feedback on the appropriateness of the pupil outcomes that have been selected as guides in determining the competencies to be developed in prospective teachers. (Are the ultimate objectives of the program the correct ones?)
2. Feedback on the effectiveness of teachers who have given competencies to bring about outcomes desired in pupils. (Are the competencies that have been identified as relevant to given outcomes the correct ones?)
3. Feedback on the effectiveness of instructional systems in bringing about the competencies for which they were designed. (Are the procedures used in the teacher education program effective?)
4. Feedback on the impact of the ComField-type program beyond its immediate influence on teachers and pupils. (Is the school or larger social system changed as a result of the program?)

More detailed specifications for the evaluation function are spelled out in the Final Report.[5]

PROGRAM MANAGEMENT

Because of the performance-based, individually paced, personalized and largely self-instructional nature of a ComField- type teacher education program, the management of such a program requires markedly different functions than those required by traditional teacher education programs. The demand of the model for continuous program evaluation and adaptation, for example, or for mutually supportive working relationships between schools and colleges, requires that relatively unprecedented evaluative and adaptive functions be built into such a program if it is to operate as planned. As a consequence, specifications for the functions needed in support of the ComField instructional model are critical adjuncts to the instructional model itself.

Three specifications are contained in the ComField model relative to the management function. These are:

1. The management model shall contain the support functions required to permit a ComField-type instructional program to operate.
2. Cost data shall be provided for all operations with a ComField-type teacher education program, as well as the program as a whole.
3. The management model shall be organized in such a way that all functions within it will have as their aim the enhancement of instruction.

These various functions have already been reviewed so further attention will not be given them here.[6] Also, detailed specifications relative to management functions may be found in the Final Report.[7] In studying these specifications the reader will realize that the task of creating a functional management system for the program is comparable in magnitude to the task of creating the instructional program.

SUMMARY

The ComField model of an elementary teacher education program is the product of a consortium of 26 colleges and universities from the Northwest region of the United States working in cooperation with five state departments of education, the Northwest Regional Educational Laboratory, and the

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[5] Ibid., pp. 120-23.

[6] Ibid., pp. 21-25.

[7] Ibid., pp. 106-26.

Teaching Research Division of the Oregon State System of Higher Education. The model specifies that each prospective teacher demonstrate the ability, under both simulated and live classroom conditions, to effect changes in the behavior of pupils that reflect the outcomes desired for them. In addition, the ComField model specifies that each prospective teacher demonstrate that he can effectively perform the noninstructional tasks required of him in a school setting, that he demonstrate that he can effectively use interpersonal or group process skills to facilitate the application of instructional and noninstructional competencies, and that he demonstrate that he has integrated all professional competencies into a unique and personally relevant teaching style.

Procedurally, the ComField model specifies that instructional systems be employed to bring about professional competencies and their personalization; that instruction within these systems be individualized with respect to point of entry into the curriculum, pacing, sequencing, information processing preferences, etc.; and that a computer-based information management system be used to handle the frequent and diverse demands upon information created by the above. Two additional procedural requirements are specified: Cost/benefit data is to be provided for all aspects of the program, and an adaptive mechanism is to be developed to insure the continuous modification of the program in light of evidence as to its costs, effectiveness, and appropriateness. A management model designed to implement these procedures within participating colleges and schools is also specified.

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